



## UNITED STATES PATENT AND TRADEMARK OFFICE

## BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

*EX PARTE*  
VLAD ZAHARIA and PEDRO S. BARANDA

Appeal No.: 2004-0837

Application: 09/778,481

Board of Patent Appeals and Interferences  
United States Patent and Trademark  
P. O. Box 1450  
Alexandria, VA 22313-1450

BOARD OF PATENT  
APPEALS &  
INTERFERENCES  
AUG 25 2004

**REQUEST FOR REHEARING**

Applicant respectfully requests a rehearing of the Decision on Appeal that was mailed June 8, 2004. Applicant appreciates the reversal of the §112 rejections. Applicant respectfully submits that the §103 rejections also should have been reversed.

**INTRODUCTION**

There are several points that Applicant believes to have been misapprehended or overlooked when rendering the Decision on Appeal. First, the "Official Notice" taken in the decision does not comply with MPEP 2144.03 and the cases cited in that section. Second, various statements of the Examiner were considered "undisputed" even though Applicant contested the rejections in their entirety. Third, the "dispositive question" described in the decision is only dispositive if decided in Applicant's favor but when decided in the manner

stated in the decision, requires further analysis at a minimum. Applicant also respectfully submits that the Board's answer to that question is incorrect.

1. **The Official Notice Taken At Page 13 of the Decision Does Not Comply With MPEP 2144.03.**

Throughout much of the discussion of the §103 rejection, there is an assumption regarding what is considered "well-known" to one skilled in the art, which has no support in the cited references or in what was common knowledge prior to Applicant's disclosure. At page 13 of the Decision, "Official Notice" is taken that essentially asserts that the entirety of claim 7, for example, was common knowledge. A similar statement is made on page 14. There are several problems with this Official Notice.

To begin with, Official Notice should only be taken when the facts asserted to be well known are capable of instant and unquestionable demonstration as being well-known. Applicant expressly traverses the Official Notice and a similar statement on page 14 of the decision and respectfully requests some documentary proof that the assertions in and associated with the Official Notice are well-known facts.

Perhaps the citation to the *Saito* reference at column 2, lines 58-66, and column 3, lines 15-16, is intended to provide support for the Official Notice. The contents of the *Saito* reference apparently were misapprehended as they do not provide any support for what is taken as officially noted.

The portions of the *Saito* reference cited in the decision have nothing to do with placement of a sensor or considering the various system characteristics described in the Official Notice. Instead, the *Saito* reference teaches a particular groove shape on a sheave to prevent *wear of the sheave surface*. That has nothing to do with the items mentioned in the

Official Notice. Therefore, the *Saito* reference does not provide any support and the facts asserted to be well-known are not. Applicant's disclosure is the only item of record that recognizes the use of the considerations referenced in the Official Notice.

Without specific, concrete evidence in the record to support the findings stated at page 13 of the decision, those findings cannot support an obviousness rejection. See, e.g., MPEP 2144.03(B).

Moreover, Official Notice should be taken only of a relatively "insubstantial portion" of the bases for a ground of rejection. Official Notice cannot be taken of the entirety of a claim. MPEP 2144.03(E) provides:

Any facts so noticed should be of notorious character and serve only to "fill in the gaps" in an insubstantial manner which might exist in the evidentiary showing made by the Examiner to support a particular ground for rejection. It is never appropriate to rely solely on common knowledge in the art without evidentiary support in the record as the principal evidence upon which a rejection was based.

As noted above, the *Saito* reference does not support the Official Notice taken in the decision. In order to sustain the rejections under §103, specific evidentiary support must be provided for the conclusions drawn in the "Official Notice" and the conclusions in the decision that depend from that Official Notice.

What also should be considered in this regard is that traditional rope inspection techniques include a manual, visual inspection (referenced in paragraph 5 in the background portion of Applicant's specification). Visual inspection techniques involve a technician manually observing the exterior of a rope to try to determine how many irregularities exist indicating a wear condition of the rope. Manual, tactile inspection, where a technician places a cloth material between his hand and the rope and manually feels the exterior of the rope, is typically used initially to try to discern where defects in the rope are located.

These traditional inspection techniques did not require consideration of where to place a sensor. The manual inspection typically was conducted in a way that the technician would attempt as much as possible to observe the entire rope. As such, consideration of the variables mentioned for the first time in Applicant's disclosure was not an issue with traditional inspection techniques.

The disclosure of inspecting devices such as those shown in the *Yamagami* and *Hirama* references are not instructive on any sensor placement strategy. Given the common knowledge of inspecting manually and the disclosure of the *Yamagami* or *Hirama* references, Applicant respectfully submits that without an express statement of a strategy for placing the sensor, only traditional, manual inspection knowledge would have been utilized. That knowledge did not include any strategic placement considerations, which have been disclosed for the first time by Applicant. One skilled in the art would not necessarily or automatically know to consider various system variables or even to know to attempt to place the sensor in a position to detect a portion of a belt or rope that is most likely to wear.

The placement of the sensors in the *Yamagami* and *Hirama* references are merely placement within a machine room, which seems at least somewhat logical given the arrangements shown in those references. Those placements do not observe the portion of the rope most likely to wear consistent with Applicant's invention.<sup>1</sup> Applicant respectfully submits that without an express teaching or at least some suggestion in the references to use a strategy to place the sensors of *Yamagami* or *Hirama* in accordance with Applicant's invention, it is wholly improper to assume that the realizations made by Applicant and the

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<sup>1</sup> The *Hirama* reference does not teach a sensor placement that accomplishes what the Examiner and the Board have concluded. That aspect of this Request for Rehearing will be described in more detail below. The placement suggested by the Examiner in the improper combination with *Saito* fails to monitor the portion of the rope most likely to wear. The failure of the art is indicative of the absence of what the Board concluded would have "necessarily or appropriately" been done by the skilled artisan.

strategy described by Applicant would have been known in the art. The traditional inspection techniques and the absence of any need to consider the variables considered for the first time by Applicant when using those traditional inspection techniques combined with the silence of *Yamagami* and/or *Hirama* on a strategic placement of their sensors and the failure of the art to meet Applicant's claims requires a conclusion opposite from that made when taking Official Notice in the decision on appeal.

Without the Official Notice, which cannot be taken (or at a minimum must be supported by documentary evidence), the rejection under 35 U.S.C. §103 of Applicant's claims must be reversed. At a minimum, the limitations of claims 6-9, 13-16 and 22 are not shown by the references or any combination of them, and the Official Notice of those features cannot be supported. Therefore, at a minimum these claims cannot be considered obvious.

**2. The "Undisputed" Findings Of The Examiner Were Disputed And Are Not Supported By The Record.**

The Decision on Appeal improperly labels many of the Examiner's statements as "undisputed" and considers them factual. It is important to note that Applicant contested the §103 rejections in their entirety. Applicant contested the proposed combination made by the Examiner. By asserting that the combination is improper, Applicant necessarily asserted that all conclusions drawn by the Examiner when making the combination (or after making it), are inappropriate. Applicant properly contended that the combination could not be made.<sup>2</sup>

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<sup>2</sup> The Board's reasoning appears to be different than the Examiner's as there is no discussion of how there is motivation to combine the references. Applicant believes the Board's decision to be an assertion that the *Yamagami* or the *Hirama* reference renders the claims obvious under 35 U.S.C. §103 but not a combination of them. If the Board's decision relies upon a combination of those two references, Applicant respectfully

As Applicant believes that the proposed combination is improper and that issue is dispositive, Applicant chose not to burden the Board with a laborious explanation of every error in the Examiner's analysis. By doing that, Applicant did not fail to dispute the Examiner's wrong assertions.

Now that the Board has relied upon several conclusions that the Board considers "undisputed," Applicant addresses why those statements are not only disputed but wrong.

Page 12 of the Decision includes the following statement:

The Examiner finds, and the Appellants do not dispute, that the sensor described in *Hirama* and/or *Yamagami* is placed in a location such that it monitors "nearly the entire length of the [elevator] rope" for any defects. Thus it is reasonable for the Examiner to conclude that the sensor described in *Hirama* and/or *Yamagami* is placed in a location useful for obtaining information on "the portion of the rope most likely to wear" which is necessarily embraced by "nearly the entire length of the rope" such in *Hirama* and/or *Yamagami*. On this record, the Appellants have not demonstrated that the sensor of *Hirama* and/or *Yamagami* would not be able to obtain information on the portion of the rope that is most likely to wear.

That is not true. As noted, Applicants have disputed the Examiner's conclusions in their entirety. There is no duty for an Appellant to point out every single error in an Examiner's analysis when the Appellant provides otherwise dispositive grounds for reversing a rejection.

In this instance, there is evidence of record that the conclusion drawn by the Examiner and endorsed by the Board is wrong. There is nothing within the *Yamagami* or *Hirama* references that teaches that the sensor placement is situated to detect wear of "the portion of the rope most likely to wear" even if most of the rope could be detected.

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submits that the combination cannot be made for all of the reasons stated previously in this record and in no way waives the right to again assert that argument to the extent that the Board is combining them or if further proceedings are required in this case. The same reasoning prevents modification of either reference, individually.

As previously discussed by Applicant, the *Yamagami* reference relies upon physical contact between its sensor and the exterior of a rope. The placement of that sensor on top of the driving sheave 2A is the most logical placement given the requirements of that sensor. The top of the driving sheave 2A in the arrangement illustrated in *Yamagami*'s Figure 1 is the point at which any exterior defects of the rope 3 will be most likely to protrude in a manner such that there is contact with the appropriate portions of the *Yamagami* sensor. If that sensor were moved to another location, there is less likelihood that an exterior defect in the rope will protrude outward in a manner to be detectable by *Yamagami*'s device. Therefore, the ideal placement of the *Yamagami* sensor is dictated by the structure of that sensor and *not* by a desire to do what Applicant proposes to do for the first time.

Even if one could assume that the *Yamagami* sensor is positioned in Figure 1 such that it detects wear of the portion of the rope 3 that is most likely to wear, that placement cannot be used when rejecting Applicant's claims. As previously stated in the record, Applicant's claims include a sensor position to detect wear on the portion of a rope or belt when that portion is spaced away from a sheave. Even if the Examiner and the Board were correct in assuming that the position of the sensor shown in Figure 1 of *Yamagami* would monitor the portion of the rope most likely to wear, that position must change before rejecting Applicant's claims. Changing that position causes any such assumption to evaporate.

There is nothing within the *Hirama* reference to suggest that its placement actually monitors the portion of the rope that is most likely to wear. That is an unsupported conclusion that finds no basis or analysis in any teaching from any reference of record. The only evidence of record points to the opposite conclusion.

Taking Applicant's disclosure into consideration, one does not reach the conclusion that the position of the sensor 5 shown in the *Hirama* reference is an optimal placement according to Applicant's teachings. Figures 3A, 3B, 4A and 4B of Applicant's disclosure show 1:1 roping arrangements. The *Hirama* reference shows a 1:1 roping arrangement. The alignment of the sheaves 60 and 62 in the example of Applicant's Figures 3A and 3B most closely corresponds to the alignment of sheaves 4A and 4B in Figure 1 of the *Hirama* reference.<sup>3</sup>

When one considers the description of the 1:1 roping arrangement in Figures 3A and 3B from page 8 of Applicant's specification, one does not conclude that the placement of the sensor 5 in *Hirama* will detect wear of the portion of the rope 2 that is most likely to wear. Taking the example of Applicant's Figures 3A and 3B, the traction sheave 60 and the deflector sheave 62 are arranged similar to the placement of the driver sheave 4A and follower sheave 4B in the *Hirama* reference. Yet Applicant's specification does not teach placing a sensor in a position as shown in the *Hirama* reference. Instead, and in direct contrast to the *Hirama* reference, Applicant teaches that the inspection device 40 of the example of Figures 3A and 3B preferably is placed "between the traction sheave 60 and the deflector sheave 62." In the *Hirama* reference, the sensor is not between the driver (i.e., traction) sheave 4A and the follower (i.e., deflection) sheave 4B. Instead, the sensor in *Hirama* is placed below the driver sheave 4A on the cage side. That is the opposite side from where Applicant teaches placing a sensor. Accordingly, one cannot conclude from this record that the *Hirama* reference teaches a placement of a sensor consistent with Applicant's claims. Because Applicant's claims read on Applicant's disclosure, and in the case of the

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<sup>3</sup> It should be noted that the *Hirama* reference shows a machine room and Applicant's invention is not necessarily limited to arrangements including a machine room and, in fact, has use in machine roomless arrangements.

sheave arrangement that most closely resembles that of *Hirama*, the sensor placement is on an opposite side of the drive sheave compared to *Hirama*, it is unfair and unsupported by the record to make the conclusion given by the Examiner and endorsed in the Decision on Appeal.

The example of Figures 4A and 4B from Applicant's disclosure shows another 1:1 roping arrangement. The sensor placement taught in connection with that example is not the same as *Hirama*, either.

The disputed and improper conclusion that *Hirama* and/or *Yamagami* necessarily teach monitoring a portion of a rope that is most likely to wear is wrong. Without that conclusion, none of Applicant's claims can be considered obvious. After proper reconsideration of this conclusion, the Board should reverse the rejections under 35 U.S.C. §103 and can do so on this basis alone.

The conclusion made at the bottom of page 13 of the Decision regarding the alleged absence of a dispute of the Examiner's finding at page 6 of the Answer is incorrect. The Examiner's statement at issue is:

*Saito* illustrates the use of roping ratios other than 1:1 and teaches in the background of the invention that as such a sheave may be placed on the cab to obtain a desired rope ratio. As such, the detector would be placed on the cab sheave.

It is not correct to say that statement was undisputed. Applicant contested every conclusion drawn by the Examiner when contesting the combination. Moreover, the last quoted sentence suggesting placing the detector on the cab sheave, which was followed by the Board at the top of page 14 of the Decision, is not supported by the art and does not result in the claimed invention. There is no indication of any motivation for moving the *Yamagami* or *Hirama* sensors onto a cab just because a cab includes a sheave as shown by

*Saito*. How the teachings of *Saito* suggest changing the placement of a sensor from inside a machine room as taught by *Yamagami* and/or *Hirama* is unexplained and unsupported by the record. Even if the roping arrangement shown in *Saito* is “well-known” that says nothing about a sensor placement strategy. Even if it were not disputed that the placement of a sheave is a function of a desired rope ratio for a given elevator system, that says nothing about sensor placement. The placement of a sheave to achieve a desired rope ratio is not the same as the placement of a sensor for observing a condition of a rope. Applicant, for the first time, recognizes the advantages of taking into consideration things like sheave placement when making a strategic determination for where to place a sensor.

*Saito* is concerned with vibration suppression and, as noted above, a particular groove configuration on a sheave. Taking those teachings on their face, there is no suggestion for using *Saito* to strategically place a sensor as taught for the first time by Applicant. The conclusion drawn by the Examiner and the Board that the rope arrangement shown in *Saito* would have led somebody to move *Yamagami*’s or *Hirama*’s sensor from inside a machine room into a position on top of the cab (within a hoistway) just because there happens to be another sheave there finds no support when one considers the teachings of those references and the evidence of record.

The combination cannot be made, for example, because there is no purported benefit for doing so. What benefit would there be to relocating the *Hirama* or *Yamagami* sensors into a position on the *Saito* cab adjacent the sheave 10 of that reference? When there is no benefit to making a modification to a reference, there is no motivation for doing so and no *prima facie* case of obviousness.

Even if the missing motivation could be manufactured, the result is not consistent with Applicant's invention. If one again considers Applicant's disclosure, the sheave arrangement shown in *Saito* may be considered to be most closely aligned with the sheave arrangement shown in Figures 2A and 2B of Applicant's drawings. The sensor placement in the example of Applicant's Figures 2A and 2B is not on the cab with one of the sheaves 56 or 54. Instead, the sensor placement to detect wear according to Applicant's invention in the example given in Figures 2A and 2B is at a fixed point in the hoistway below the traction sheave 50 on the counterweight side 58. Therefore, not only is there no support for making the combination, but even if it were made, it does not provide the result of Applicant's invention. Applicant's claims necessarily read on the example of Figures 2A and 2B and that sensor placement is not the same as what is proposed by the Examiner and the Board. Therefore, the two are not consistent and it is not a fair conclusion (at least not supported by anything in this record) that the improper combination of *Saito*, *Hirama* and/or *Yamagami* is the same as Applicant's invention.

The fact that the combined teachings of the art fail to meet Applicant's claims (even with the luxury of hindsight for making the combination) supports Applicant's position that the Official Notice and related conclusions in the Decision on Appeal are unfounded.

The last "undisputed" finding that Applicant would like to point out as being incorrect for purposes of this Request for Rehearing<sup>4</sup> is found at page 10 of the Decision on Appeal. The statement that "both *Yamagami* and *Hirama* teach...a counterweight corresponding to the claimed metallic load bearing members," is not correct. The claimed

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<sup>4</sup> Applicant is not waiving the ability to contest any other "undisputed" findings that were not necessary to discuss for purposes of this Request for Rehearing. Applicant expressly contests every ground of rejection and reserves the right to contest any other "undisputed" findings stated by the Board in the decision to the extent that it becomes necessary in any further proceedings in this matter.

metallic load bearing members are part of the claimed rope of claim 1, for example. Applicant points this out not because it is believed important to change the decision on appeal but in order to ensure that the record is clear that Applicant's claims do not require a counterweight.

**3. The Decision On Appeal Improperly Labels The Statement At The End Of Page 11 As "The Dispositive Question"**

At the end of page 11, the Decision states:

Thus, the dispositive question is whether one of ordinary skill in the art would have placed the sensor of the type described in *Hirama* and/or *Yamagami* to "provide information regarding a wear condition of a portion or the entire portion of the rope that is most likely to wear when the portion is away from the sheave."

This question is not necessarily dispositive of the issue whether all of Applicant's claims can be considered obvious. Many of Applicant's claims include limitations that are not shown or suggested by the art even if one could properly answer that question in the affirmative.

Applicant agrees with the Board's characterization if the question is answered in the negative. Then, and only then, is it wholly dispositive. By answering the question in the affirmative, however, the Board is required to then analyze whether every limitation of every claim is shown by the art resulting from placing the *Hirama* and/or *Yamagami* sensor as stated by the Board. Even if one of ordinary skill in the art would have placed one of those sensors to "provide information regarding a wear condition of a portion or the entire portion of the rope that is most likely to wear when the portion is away from the sheave," that does not include any analysis of whether one skilled in the art would necessarily have taken into consideration any of the limitations in, for example, claims 6-9, 13-16 or 22. The only one who discusses those limitations in connection with sensor placement is Applicant.

The art is silent regarding considering those as an indication or a consideration for how to strategically place a sensor in an elevator system. Therefore, the question is wrongly labeled as dispositive of this appeal.

Moreover, it appears that the labeling of that question as "dispositive" depends (at least in part) on the conclusions drawn in the Decision on Appeal such as the "Official Notice" conclusions discussed above. As pointed out, those conclusions are inconsistent with the requirement of MPEP 2144.03 and the case law cited in that section. Moreover still, answering the "dispositive" question in the affirmative appears to depend upon the conclusions drawn in the decision in connection with the "Official Notice" or others having similar defects. The affirmative answer from the Board cannot stand when one considers what Applicant has already pointed out in this Request.

Further, the Board's affirmative answer of the "dispositive" question also hinges upon the "undisputed" findings stated in the Decision on Appeal. As noted above, those findings were not undisputed and are wrong. Without those bases, the affirmative answer to the "dispositive" question is unsupported.

Even if the affirmative answer to the "dispositive" question were fully supported by this record, the rejection of at least claims 6-9, 13-16 and 22 must be reversed. Even if the skilled artisan would find sufficient motivation to move one of those sensors into a position to meet some of Applicant's claims, there are others containing limitations nowhere contemplated or suggested by any of the art.

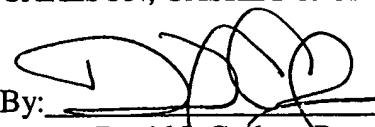
## CONCLUSION

Applicant respectfully submits that the rejections under 35 U.S.C. §103 should have been reversed. The Official Notice taken in the decision (and any similarly drawn conclusion) does not comply with the Patent Office's duty associated with taking "Official Notice." Without that Official Notice, there is no proper rejection of the claims that include limitations that are the subject of the "Official Notice." The decision also includes a number of erroneously labeled "undisputed" facts or findings. Without those, the rejections under 35 U.S.C. §103 cannot be sustained. Given the absence of a proper Official Notice and the unreliability of the "undisputed" facts, the sole question answered by the Board in the decision is not "dispositive" and was answered incorrectly.

There is no motivation for modifying the *Yamagami* and/or *Hirama* references to render them consistent with Applicant's claims. The art fails to teach how one would do that. Moreover, any such modification does not result in the claimed invention. The conclusions drawn by the Examiner and the Board are not consistent with the law regarding establishing a *prima facie* case of obviousness and are not consistent with the record. Applicant respectfully submits that the Decision on Appeal requires reconsideration and a different conclusion. The rejections under 35 U.S.C. §103 must be reversed.

Respectfully submitted,

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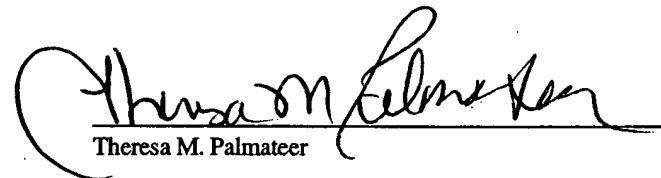
Dated: August 9, 2004



60,469-034

CERTIFICATE OF MAILING

I hereby certify that the enclosed Request for Rehearing (in triplicate) is being deposited with the United States Postal Service as First Class Mail, postage prepaid, in an envelope addressed to Board of Patent Appeals and Interferences, United States Patent and Trademark, P. O. Box 1450, Alexandria, VA 22313-1450 on August 9, 2004.

  
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Theresa M. Palmateer

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